SPAWAR

SPAWAR

NDIA
NATIONAL DEFENSE INDUSTRIAL ASSOCIATION

Composing FORCEnet

Science & Engineering Technology Conference

22 April 2004

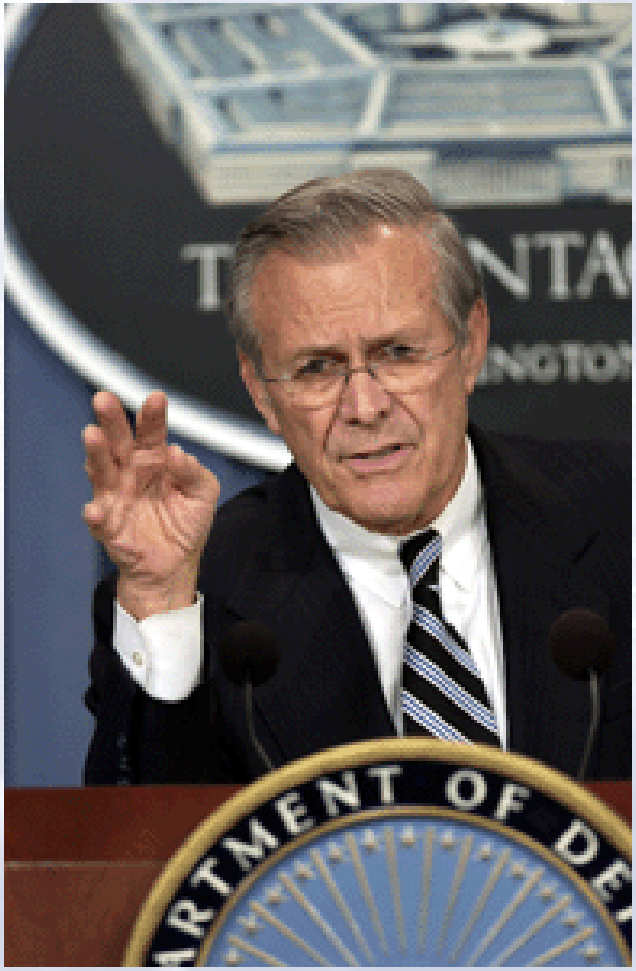
RADM Ken Slaght, USN
Commander
Space and Naval Warfare Systems Command

SPAWAR

Agenda

- Fundamental Elements
- Structured For The Joint Environment
- The Course Ahead

The Changed Nature Of Conflict



"What will follow will not be a repeat of any other conflict, it will be of a force and scope and scale that is beyond what has been seen before."

Donald Rumsfeld

Secretary of Defense

Prior to the start of Operation Iraqi Freedom

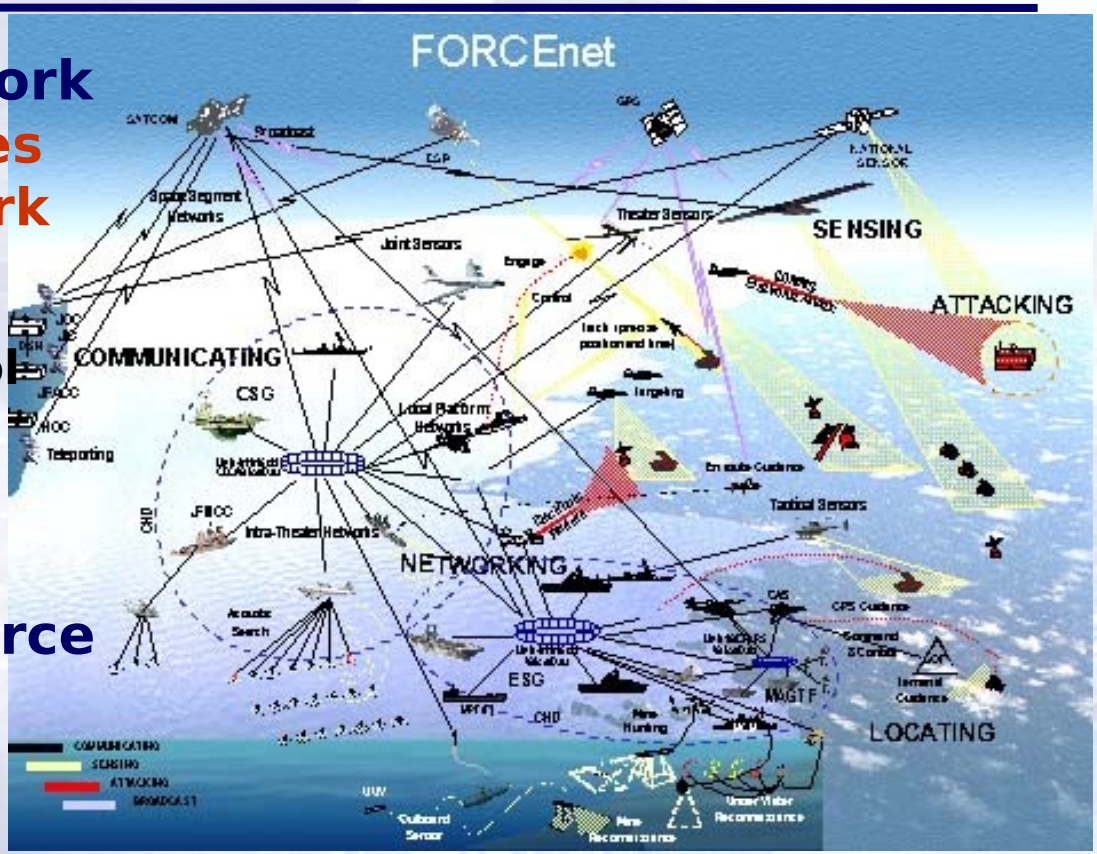
SPAWAR

The Navy's Vision

FORCEnet Today ...The First Steps

What Is FORCEnet?

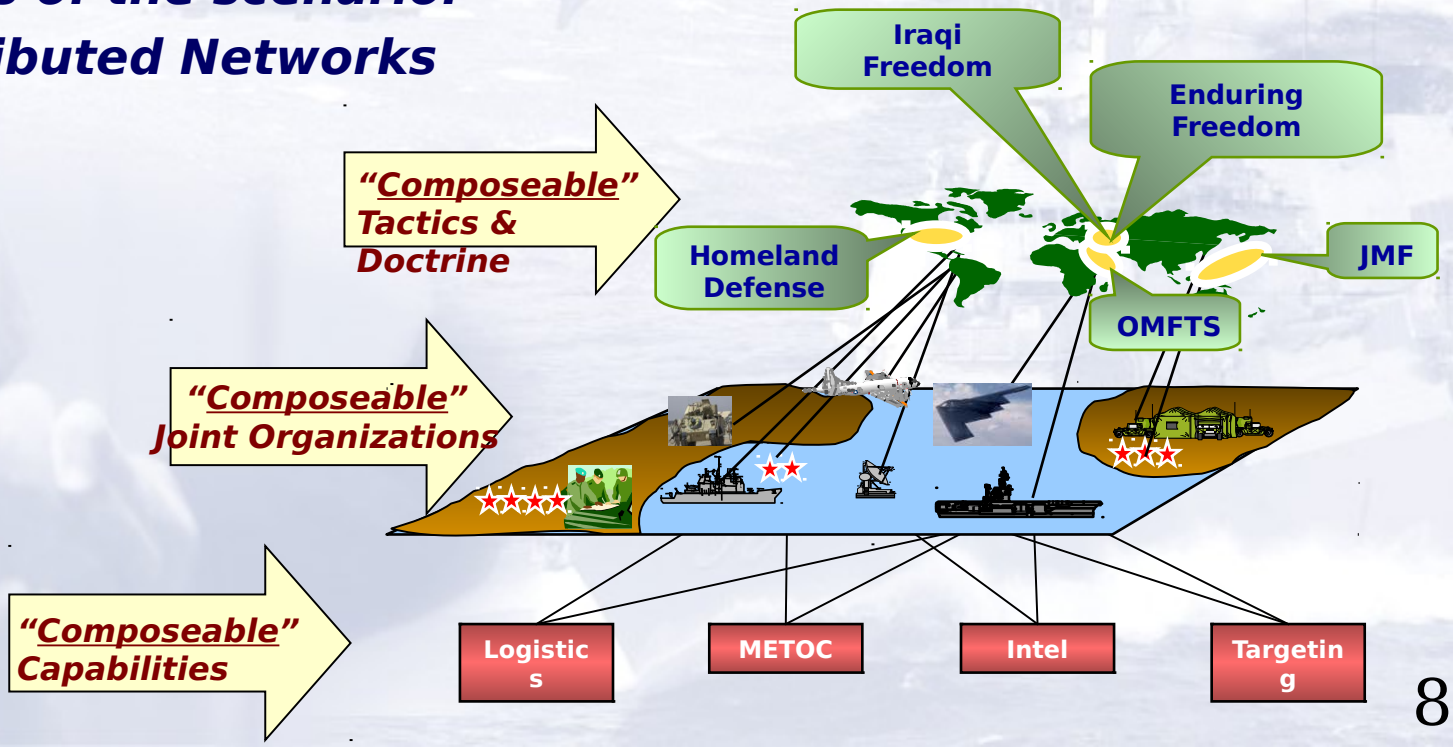
- **Architectural Framework**
  - **Aligns and integrates into a single network**
    - **Warriors**
    - **Sensors**
    - **Command & Control**
    - **Platforms**
    - **Weapons**
- **Globally networked, distributed combat force**
- **Scalable**



- **Transforms doctrine, organization, technology, leadership, personnel, facilities, e.g. warfighting capability into globally networked distributed combat force.**

FORCEnet Elements

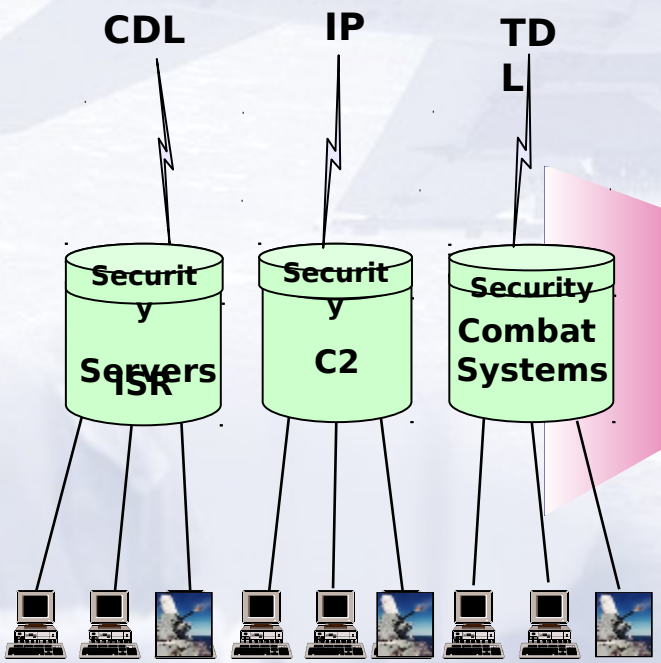
- *"Composeability" -- The ability to select "on the fly" from a vast network, the specific information resources which are best suited to solving a particular problem or providing specific information.*
- *"On the fly" -- Sources will change with the information needs of the scenario.*
- *Distributed Networks*



Push To A Common Environment

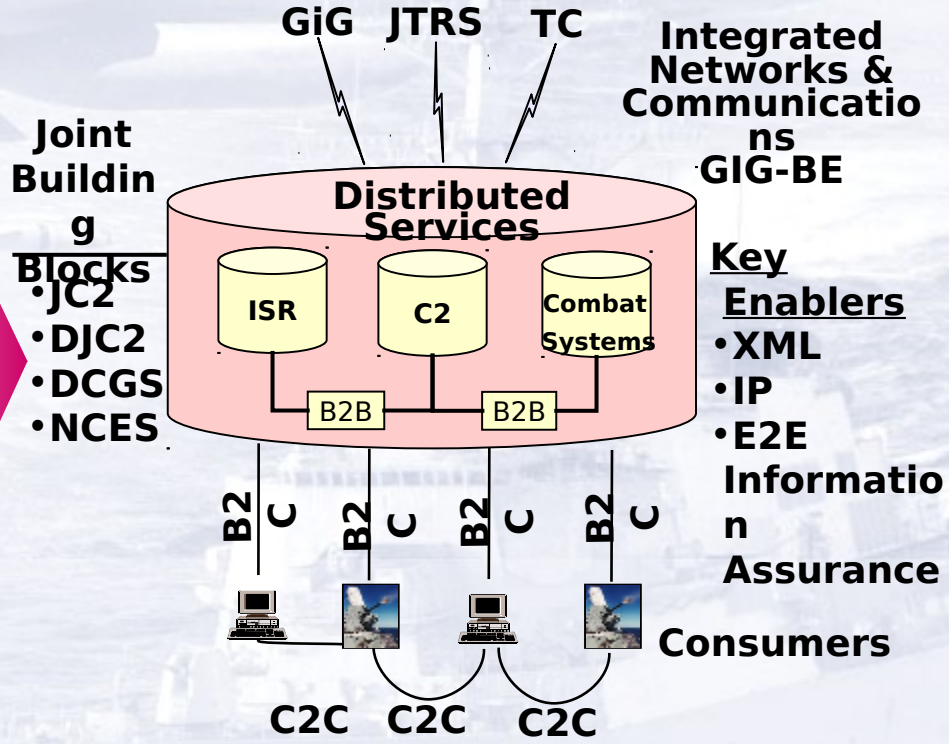
Current

Stovepipe Communications



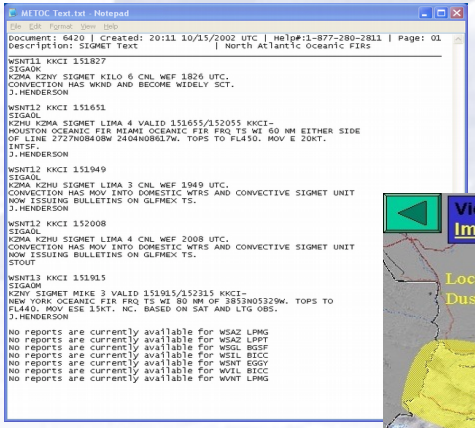
Clients

FORCEnet Target

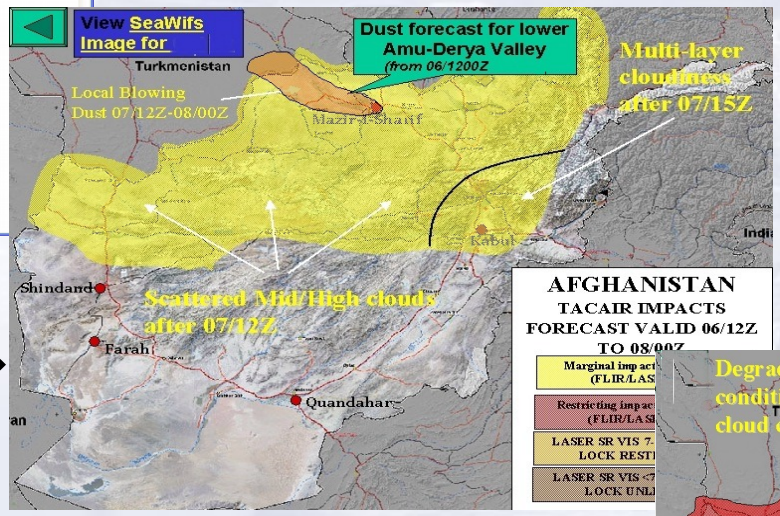


B2B = Business to Business
B2C = Business to Consumer
C2C = Consumer to Consumer
(Enabling Publish/Subscribe Solutions)

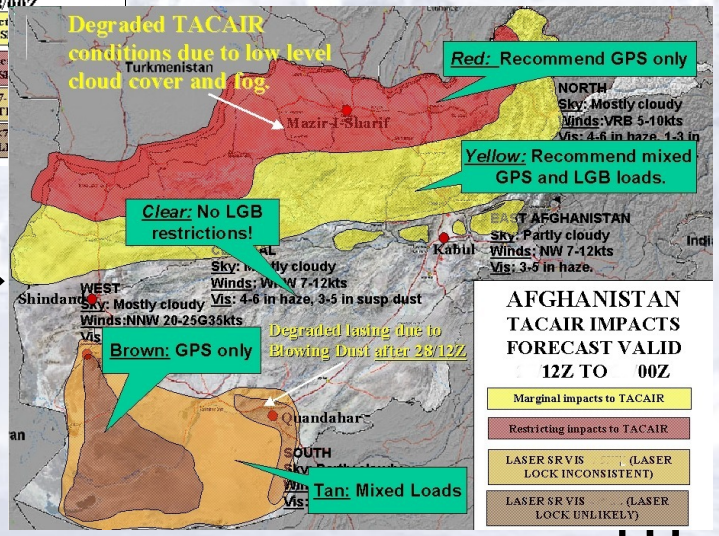
Evolution Of Data To Information To Knowledge – an example


METOC Text.txt - Notepad
Document: 6420 | Created: 20:11 10/15/2002 UTC | Help#:1-877-280-2811 | Page: 01
Description: SIGMET Text | North Atlantic Oceanic FIRs
WSNT11 KKCI 151827
SIGAOK
KZMA KZNY SIGMET KILO 6 CNL WEF 1826 UTC.
CONVECTION HAS WKND AND BECOME WIDELY SCT.
J.HENDERSON
WSNT12 KKCI 151651
SIGAOL
KZHU KZMA SIGMET LIMA 4 VALID 151655/152055 KKCI-
HOUSTON OCEANIC FIR MIAMI OCEANIC FIR FRQ TS WI 60 NM EITHER SIDE
OF LINE 2727N08408W 2404N08617W. TOPS TO FL450. MOV E 20KT.
INTSF.
J.HENDERSON
WSNT12 KKCI 151949
SIGAOL
KZMA KZHU SIGMET LIMA 3 CNL WEF 1949 UTC.
CONVECTION HAS MOV INTO DOMESTIC WTRS AND CONVECTIVE SIGMET UNIT
NOW ISSUING BULLETINS ON GLFMEX TS.
J.HENDERSON
WSNT12 KKCI 152008
SIGAOL
KZMA KZHU SIGMET LIMA 4 CNL WEF 2008 UTC.
CONVECTION HAS MOV INTO DOMESTIC WTRS AND CONVECTIVE SIGMET UNIT
NOW ISSUING BULLETINS ON GLFMEX TS.
STOUT
WSNT13 KKCI 151915
SIGAOM
KZNY SIGMET MIKE 3 VALID 151915/152315 KKCI-
NEW YORK OCEANIC FIR FRQ TS WI 80 NM OF 3853N05329W. TOPS TO
FL440. MOV ESE 15KT. NC. BASED ON SAT AND LTG OBS.
J.HENDERSON
No reports are currently available for WSAZ LPMG
No reports are currently available for WSAZ LPDT
No reports are currently available for WSGL BGSF
No reports are currently available for WSIL BICC
No reports are currently available for WSNT EGGY
No reports are currently available for WVIL BICC
No reports are currently available for WVNT LPMG

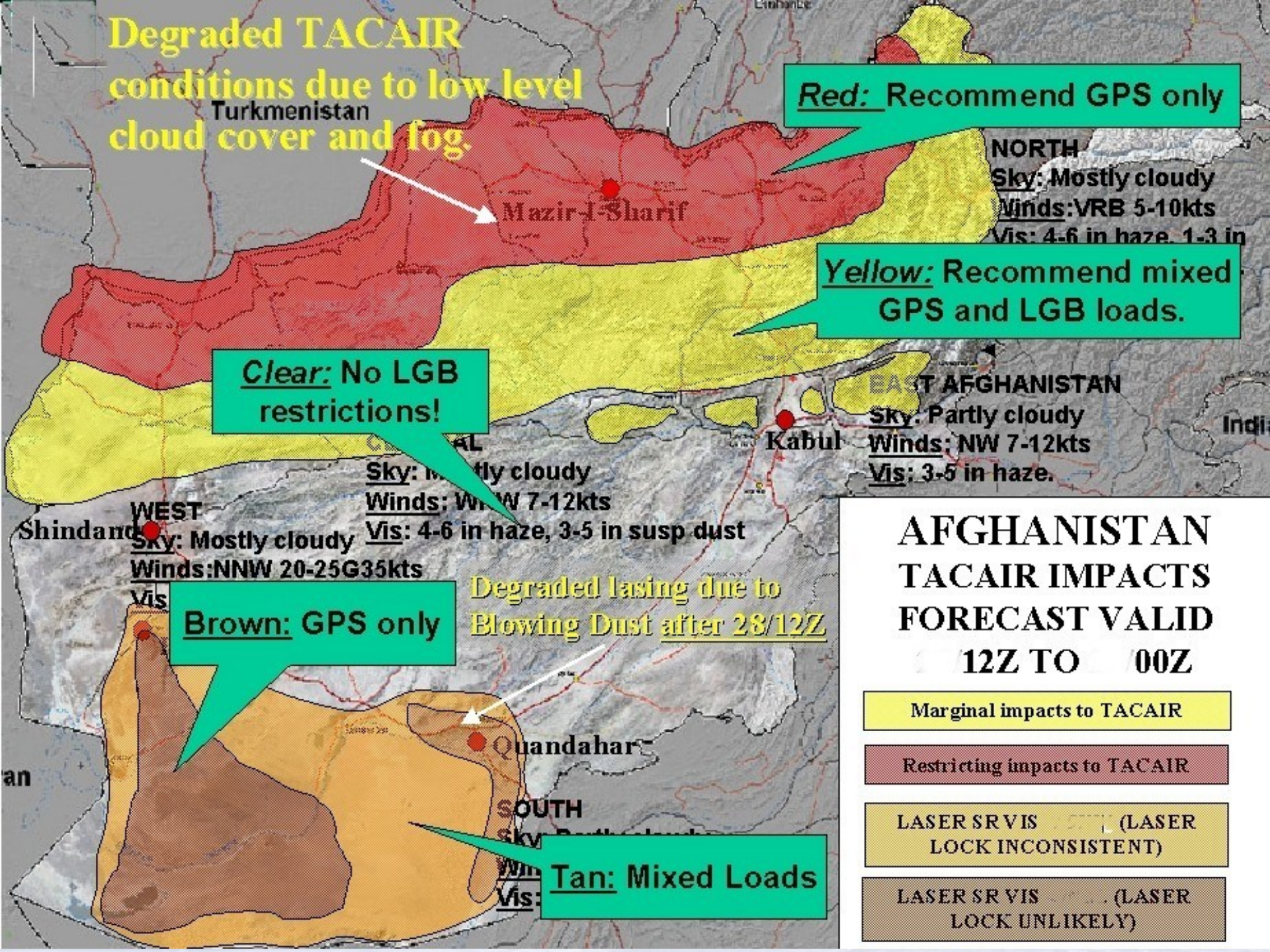
Data: Typical Text based weather product



Information: raw and semi-processed data represented graphically



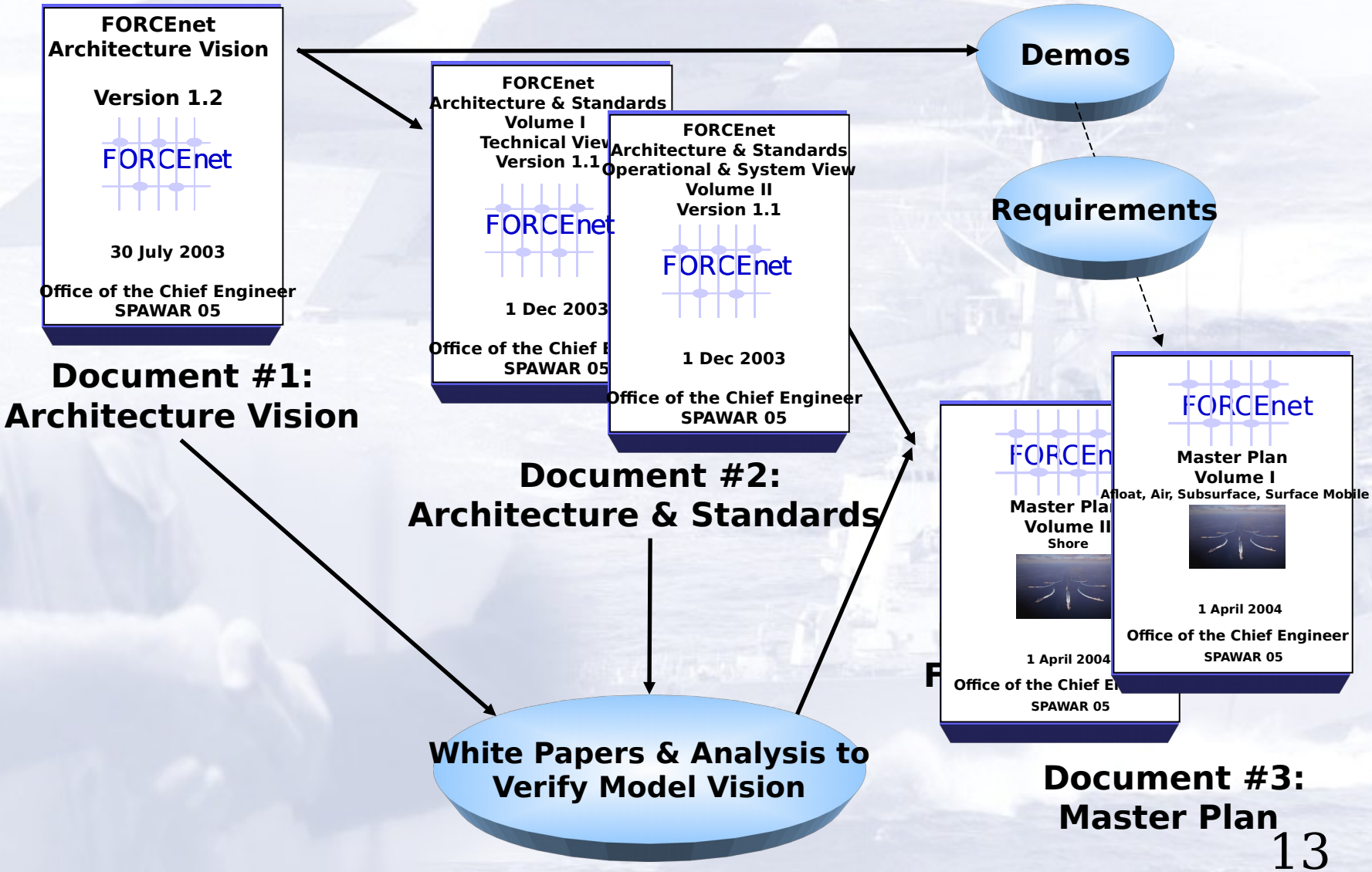
Knowledge: weather data and info translated into usable, understandable *Knowledge* of immediate value to planners and pilots


Degraded TACAIR conditions due to low level cloud cover and fog.
Turkmenistan
Red: Recommend GPS only
NORTH
Sky: Mostly cloudy
Winds:VRB 5-10kts
Mazir-I-Sharif
Yellow: Recommend mixed GPS and LGB loads.
Clear: No LGB restrictions!
EAST AFGHANISTAN
Sky: Partly cloudy
Winds: NW 7-12kts
Vis: 3-5 in haze.
Kabul
Sky: Mostly cloudy
Winds: NW 7-12kts
Vis: 4-6 in haze, 3-5 in susp dust
WEST
Shindand
Sky: Mostly cloudy
Winds:NNW 20-25G35kts
Brown: GPS only
Degraded lasing due to Blowing Dust after 28/12Z
Quandahar
SOUTH
Tan: Mixed Loads
AFGHANISTAN
TACAIR IMPACTS
FORECAST VALID
12Z TO 00Z
Marginal impacts to TACAIR
Restricting impacts to TACAIR
LASER SR VIS (LASER LOCK INCONSISTENT)
LASER SR VIS (LASER LOCK UNLIKELY)

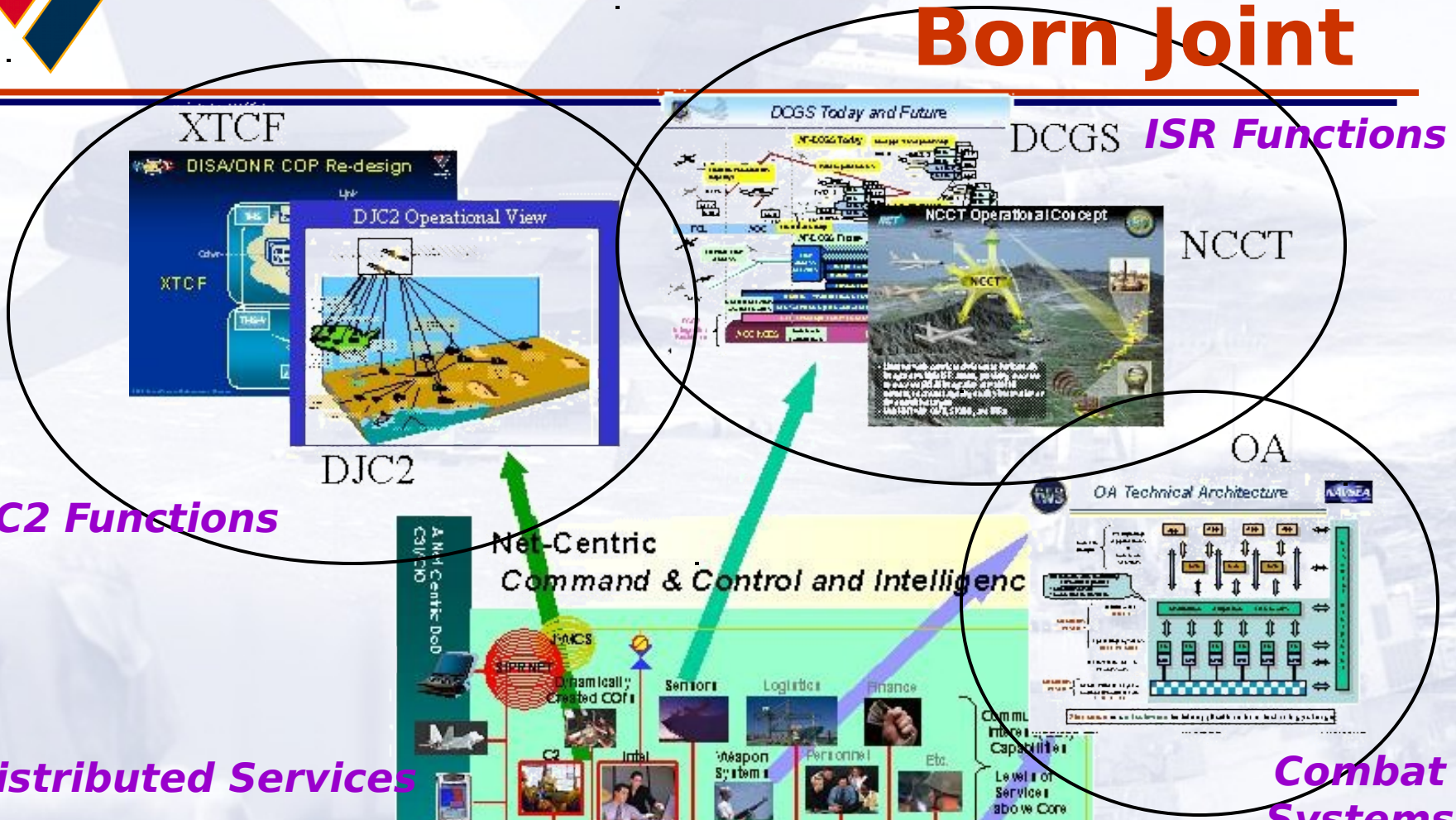
Agenda

- Fundamental Elements
- **Structured For The Joint Environment**
- The Course Ahead

Architecture Products



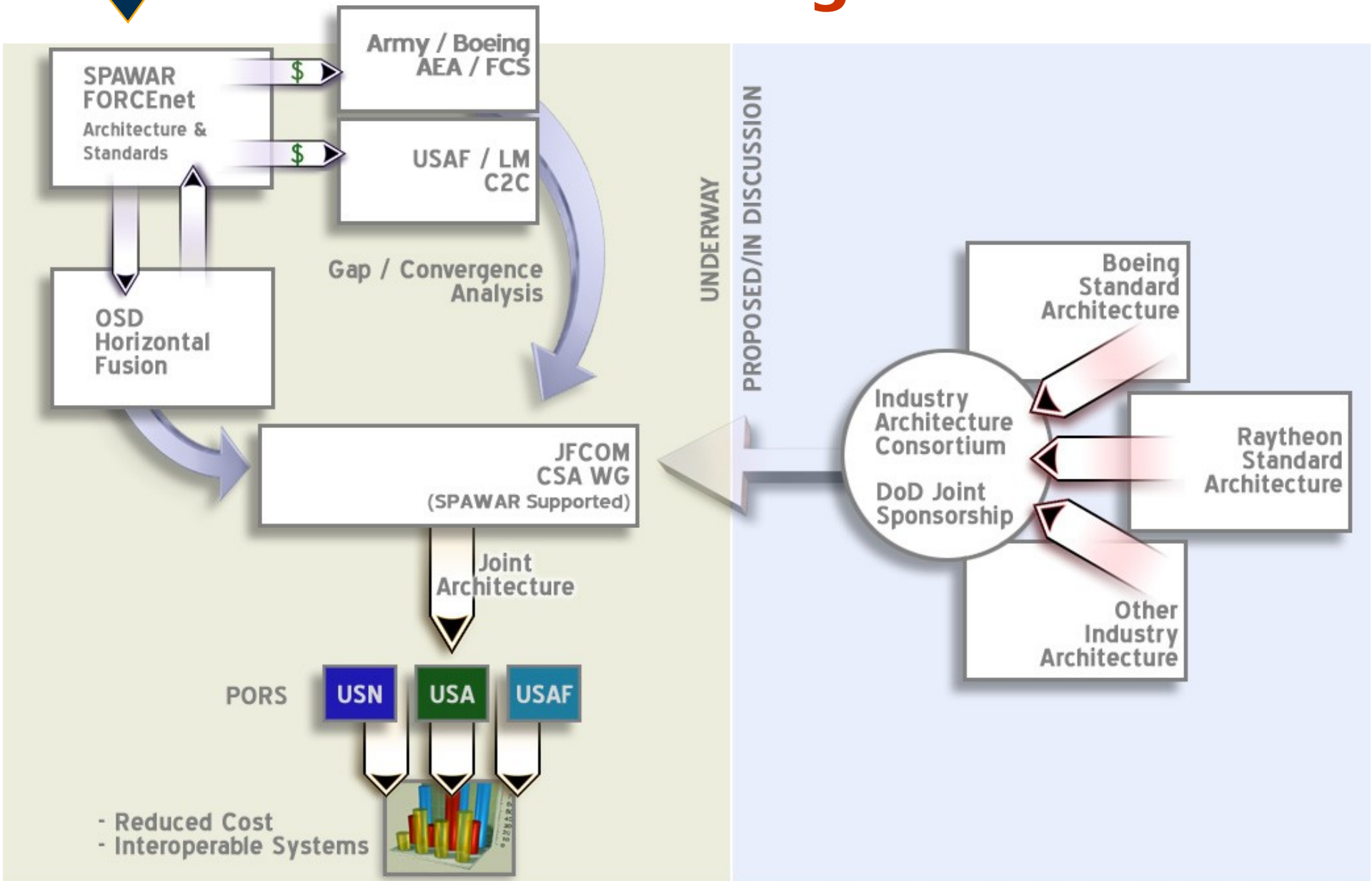
Distributed Services--Born Joint



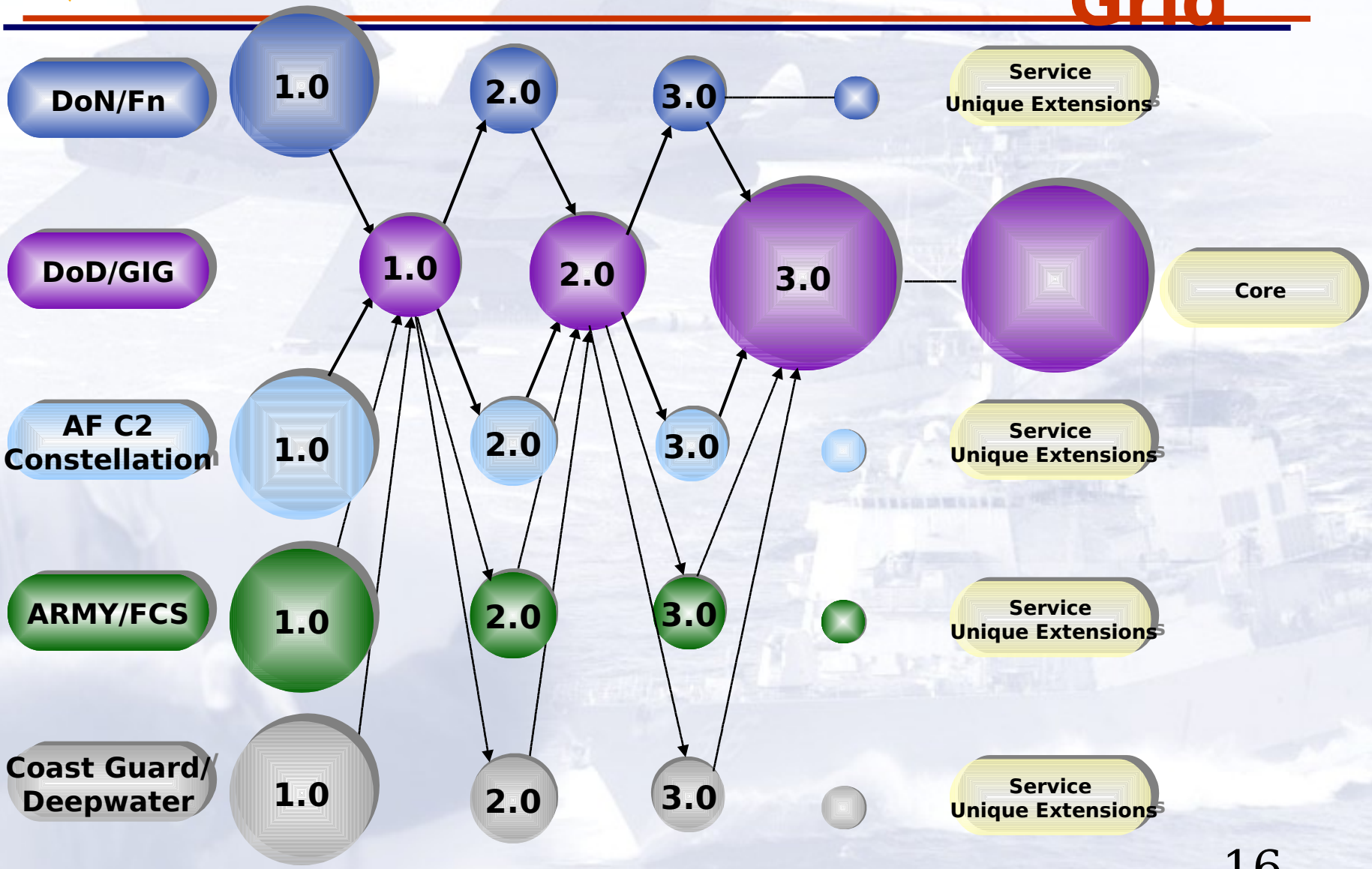
Distributed Services

DJC2 – Distributed Joint C2
NCES – Network-Centric Enterprise Services
NCCT – Network-Centric Collaborative Targeting
OA – Open Architecture
XTCF – eXtensible Tactical C4I Framework
DCGS –Distributed Common

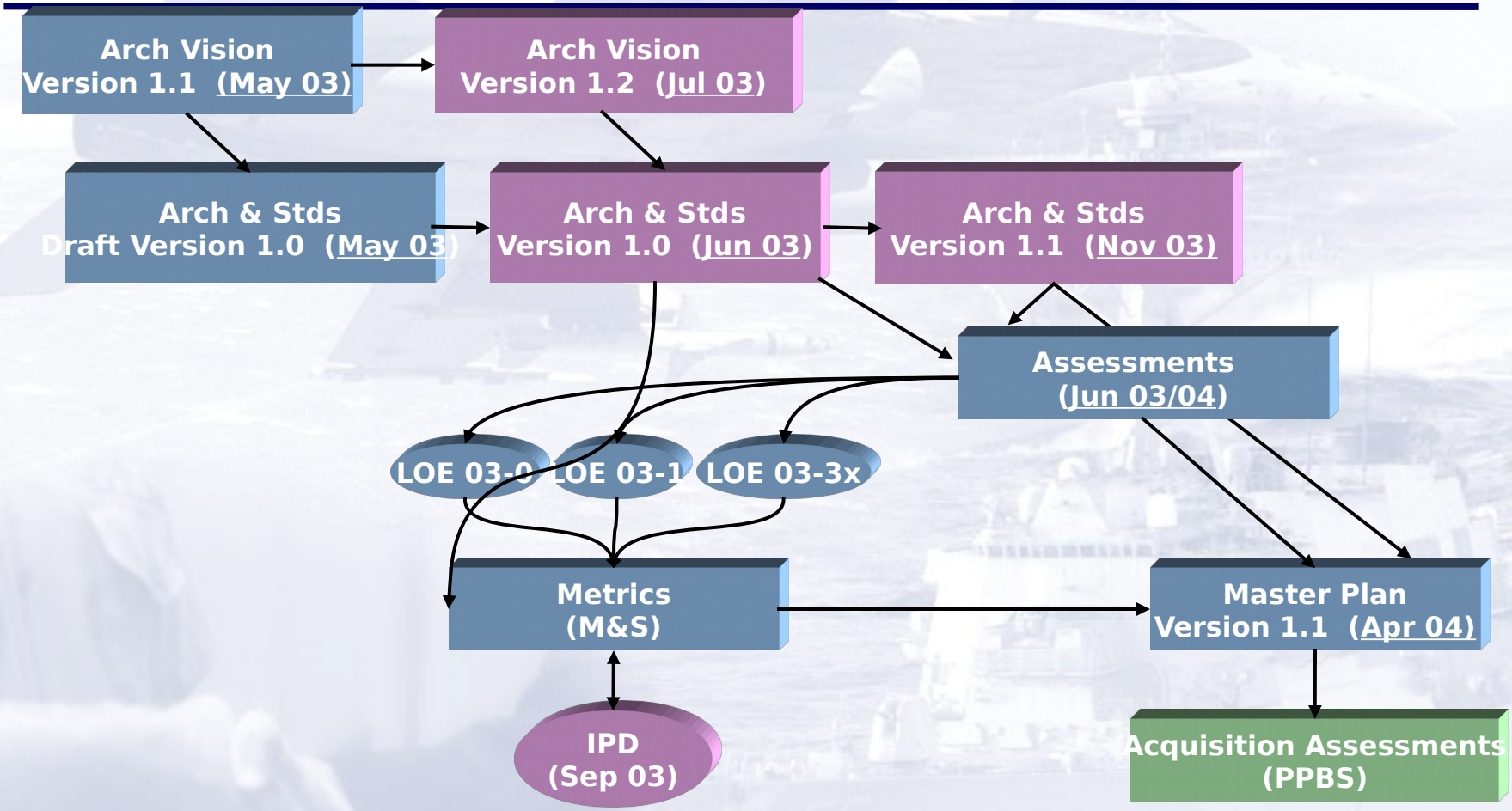
Joint Architecture & Standards Convergence Initiatives



FORCEnet Convergence With The Global Information Grid



FORCEnet: Putting It All Together


Arch Vision Version 1.1 (May 03)
Arch Vision Version 1.2 (Jul 03)
Arch & Stds Draft Version 1.0 (May 03)
Arch & Stds Version 1.0 (Jun 03)
Arch & Stds Version 1.1 (Nov 03)
Assessments (Jun 03/04)
LOE 03-0
LOE 03-1
LOE 03-3x
Metrics (M&S)
Master Plan Version 1.1 (Apr 04)
IPD (Sep 03)
Acquisition Assessments (PPBS)

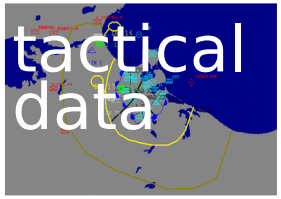
Co-Evolution of Concepts, Architecture, Experiments and POR Execution

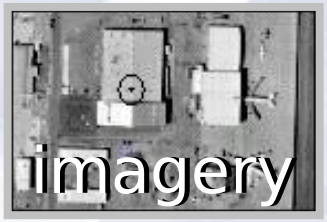
SPAWAR

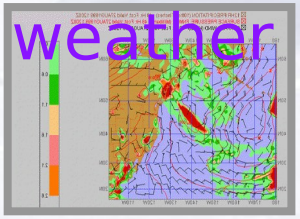
Agenda

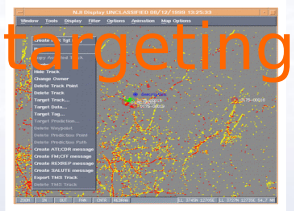
- Fundamental Elements
- Structured For The Joint Environment
- **The Course Ahead**

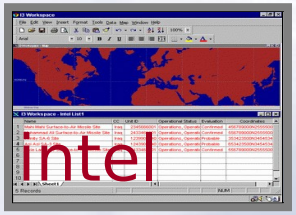
Our Vision For The Future…



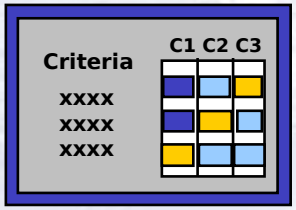


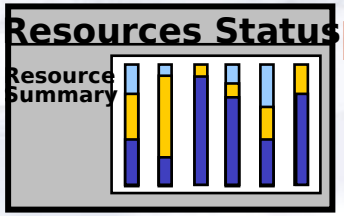






Course of Action

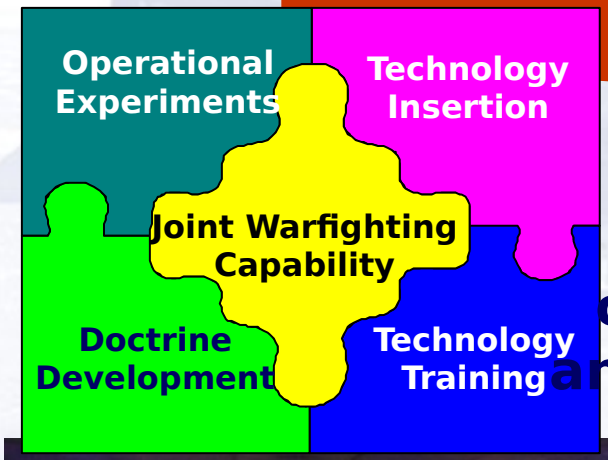




Readiness

Information integration at a single display.

What's It Going To Take?



Architecture

Sea Trial

Technologists, operators, experimenters, and acquisition professionals

Assessment

Composeable FORCEnet Capability

SPAWAR

Summary

- FORCEnet Foundation Laid in FY03
  - Architecture
  - Standards
  - Assessments
  - Process & Tools
- Focus Shifting to Implementation
  - Virtual SYSCOM a Key Enabler
- Navy Leading the Joint Effort

FORCEnet Delivery Begins this FY!

SPAWAR